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A PROGRAM MANAGER'S
ACQUISITION STRATEGY GUIDE

Major Roger F. Wickert, USAF

85-2850

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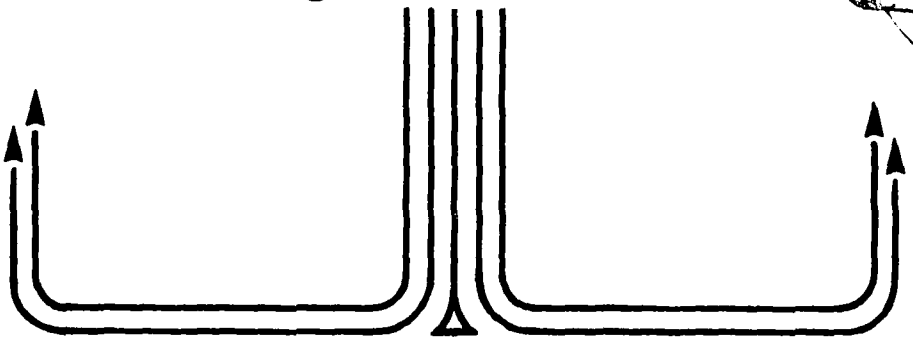

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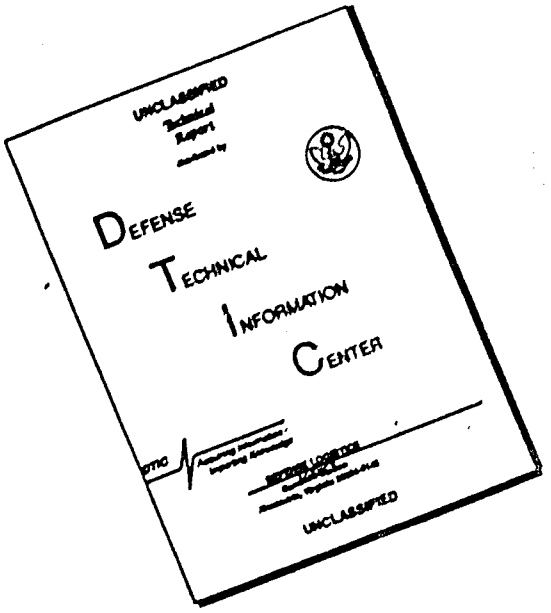

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REPORT NUMBER 85-2850

TITLE A PROGRAM MANAGER'S ACQUISITION STRATEGY GUIDE

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Submitted to the faculty in partial fulfillment of
requirements for graduation.

AIR COMMAND AND STAFF COLLEGE
AIR UNIVERSITY
MAXWELL AFB, AL 36112

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED	1b. RESTRICTIVE MARKINGS
2a. SECURITY CLASSIFICATION AUTHORITY	3. DISTRIBUTION/AVAILABILITY OF REPORT
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE	
4. PERFORMING ORGANIZATION REPORT NUMBER(S) 85-2850	5. MONITORING ORGANIZATION REPORT NUMBER(S)
6a. NAME OF PERFORMING ORGANIZATION ACSC/EDCC — 6b. OFFICE SYMBOL (*If applicable*)	7a. NAME OF MONITORING ORGANIZATION
6c. ADDRESS (*City, State and ZIP Code*) Maxwell AFB AL 36112	7b. ADDRESS (*City, State and ZIP Code*)
8a. NAME OF FUNDING/SPONSORING ORGANIZATION — 8b. OFFICE SYMBOL (*If applicable*)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER
8c. ADDRESS (*City, State and ZIP Code*)	10. SOURCE OF FUNDING NOS. PROGRAM ELEMENT NO. — PROJECT NO. — TASK NO. — WORK UNIT NO.
11. TITLE (*Include Security Classification*) A PROGRAM MANAGER'S	
12. PERSONAL AUTHOR(S) Wickert, Roger F., Major, USAF	
13a. TYPE OF REPORT — 13b. TIME COVERED FROM _____ TO _____	14. DATE OF REPORT (*Yr., Mo., Day*) 1985 April — 15. PAGE COUNT 91
16. SUPPLEMENTARY NOTATION ITEM 11: ACQUISITION STRATEGY GUIDE	
17. COSATI CODES FIELD — GROUP — SUB. GR.	18. SUBJECT TERMS (*Continue on reverse if necessary and identify by block number*)

19. ABSTRACT (*Continue on reverse if necessary and identify by block number*)

This report investigates some of the problems an Air Force Systems Command acquisition program manager faces in developing a program acquisition strategy. The report also provides an acquisition strategy format and guide the program manager can use in formulating his acquisition strategy.

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT UNCLASSIFIED/UNLIMITED ☐ SAME AS RPT. ☒ OTIC USERS ☐	21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED
22a. NAME OF RESPONSIBLE INDIVIDUAL ACSC/EDCC Maxwell AFB AL 36112	22b. TELEPHONE NUMBER (*Include Area Code*) (205) 293-2483 — 22c. OFFICE SYMBOL

DD FORM 1473, 83 APR — EDITION OF 1 JAN 73 IS OBSOLETE

PREFACE

This "Acquisition Strategy Guide" was developed to help program managers remember the myriad details that will get a program through the hurdles. The "less than major" system program manager should be the primary beneficiary of this guide since many times this individual faces these hurdles alone or, at best, with a small staff. However, "major" system program managers should also find this guide helpful in "prodding" their staffs. The author assumes those using this guide are familiar with the Air Force systems acquisition process. Therefore, the emphasis of this guide is to provide "mind ticklers" and not details of all the aspects of program management. The program manager is encouraged to add to the author's "checklist."

The author acknowledges the assistance of his sponsor, Lt Col Bob Skipp of the Air Force Business Management Research Center, Wright-Patterson AFB, Ohio. Col Skipp provided many valuable suggestions during the development of this guide.

The author also wishes to thank his family for supporting him during this year and for providing strength and encouragement. Without their help, it would have been impossible to complete this project.

ABOUT THE AUTHOR

Major Wickert graduated from the Ohio State University in 1971 with a Bachelor of Aeronautical and Astronautical Engineering degree. He received his commission through the Air Force ROTC program upon graduation. He earned a Master of Science degree in Systems Management from the University of Southern California in 1974. Major Wickert is also a graduate of the Defense Systems Management College's Program Management Course. Major Wickert has extensive acquisition experience, having served in several program management positions at the Aeronautical Systems Division and at Headquarters Air Force Systems Command. Major Wickert is a graduate of Squadron Officer School and the Air Command and Staff College.

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Chapter One

WHY DEVELOP AN ACQUISITION STRATEGY?

> The business of developing, buying, and supporting military weapon and support systems has never been more difficult, more complex, or more important. Faced with a mounting military threat and uncertain future funding, acquisition managers today find themselves cast into a vortex of competing demands that will engulf the unsuspecting and drown the unprepared. (10:55)

One way acquisition managers can avoid this "vortex" is through planning. Yet planning, in the form of developing an overall program acquisition strategy, is probably one of the most difficult aspects of the systems acquisition process.

A 1972 Air War College (AWC) study identified some of the problem areas a program manager must plan for in a systems acquisition program. This study found,

> The three-fold, interrelated problem of increasing threat, decreasing budgets, and service mismanagement is in the nature of a circular, self-fulfilling prophecy. Continued service misuse of development and procurement dollars will result in further degradation of U.S. military capability, and will engender even deeper cuts in defense appropriations by a Congress increasingly convinced that the Department of Defense cannot spend wisely even the small amount given it. The relative threat, meanwhile, continues to increase.
>
> It is imperative...that the military services find some improved way of conducting the business of acquiring new weapon systems. (15:8)

These words are as true today as they were in 1972. One answer is a sound acquisition strategy. An acquisition strategy, if properly developed, can provide the basis for structuring the optimum approach to conduct "the business of acquiring new weapon systems."

In addition, a 1981 Army study identified a less obvious, but just as important reason for developing an acquisition strategy. One conclusion of this study was,

> Failure to actively pursue such planning efforts can impede attainment of program objectives. That is, inadequate planning at the outset can lead to a mode of "crisis management" during subsequent phases of the acquisition cycle as unanticipated problems arise. Further, failure to systematically analyze and integrate all planning parameters can result in functional discord at a time when certain options to reconcile competing objectives have been foreclosed. (16:2)

Still another reason for developing a program acquisition strategy comes from the minutes of a joint services Acquisition Strategy Workshop held at the Defense Systems Management College (DSMC), Fort Belvoir, Virginia, 1-2 May 1984. According to this group, "It is apparent that for a weapon system acquisition program to proceed successfully through the life cycle it must follow a game plan that is initially developed, then adjusted to meet the changes in the acquisition environment." (13:13)

Further, a recent DSMC study, looking at lessons learned from recent, successful acquisition programs, identified perhaps the most important reason for developing an acquisition strategy. This study observed, "Contractors give credit to acquisition strategy as a reason for program success." (3:33)

If developing an acquisition strategy is so important, then what obstacles does the program manager face? A partial answer to this question comes from the minutes of the Acquisition Strategy Workshop.

> The workshop identified several important problems, the foremost being: What is an acquisition strategy? What has the acquisition community provided to the program manager that is concise and helpful in the development and execution of an acquisition strategy? That is an open question....
> * * * * * * *
> How do we develop an acquisition strategy? (13:23)

The workshop also identified some other problems with the existing acquisition strategy process. These include:

> No consistent agreement as to the structure and composition of an acquisition strategy
> - what it should encompass (elements)
> - content

- format
- concepts/issues
- level of detail/sophistication

- How to write acquisition strategy early in the acquisition process
- functional area involvement (at what level) (13:19)

To overcome these problems, the workshop concluded, "Defense acquisition managers have a valid need for guidance to develop sound acquisition strategies for new programs and to adjust the acquisition strategies of existing programs as they proceed through the life cycle." (13:13) The DSMC is developing such an acquisition strategy guide applicable to all the services. (13:13-14) However, the Air Force Business Management Research Center (AFBMRC) at Wright-Patterson Air Force Base, Ohio, wanted a look at these problem areas from an Air Force perspective. Therefore, they sponsored this research project.

Specifically, the author addresses Air Force acquisition strategy issues by: (1) reviewing development responsibilities, discussing when the acquisition strategy should be developed, and examining the level of detail necessary at the different program phases (Chapter 2); (2) defining acquisition strategy, defining its purpose, detailing specifically what should be included, and suggesting a process for developing the acquisition strategy using the new Air Force micro-computer technology (Chapter 3); and last, (3) providing a "checklist" acquisition strategy format that identifies issues the program manager must be concerned with (Chapters 4-30). These "checklist" chapters also provide some current regulatory and contemporary references for further information on the issues.

In practical terms, Chapters 4-30 of this research project form an "Acquisition Strategy Guide" that identifies considerations to think about in developing an acquisition strategy. This guide also provides a method of communicating this strategy with everyone in the program office. The guide is aimed at Air Force Systems Command (AFSC) program managers.

While the guide can be used by "major" system program directors, the author believes the "less than major" system program manager may benefit most from the guide. Generally, the small program manager faces the program management task alone or with a very small staff. The small program manager also relies heavily on part-time matrix support personnel. However, this support is not always available when needed. For example, a 1981 Air Force Institute of Technology study that surveyed several of AFSC's Aeronautical Systems Division program managers reported, "A manager of two small programs did not get support because the functional specialists (matrix personnel) supported

the larger...programs first." (17:175) Therefore, the small program manager sometimes needs to be able to do more alone and needs more detailed knowledge; yet, the small program manager is probably less experienced than the "major" system program manager. This guide can provide the assistance the small program manager needs to develop a sound acquisition strategy.

No attempt is made, however, to raise all considerations required to develop a complete acquisition strategy. As each consideration is examined, additional questions and considerations will be raised. Thus, an acquisition strategy guide evolves and expands through use by program managers. This guide, then, provides a base that can be expanded through use.

A few words of caution are in order concerning this guide. First, this guide is written for those familiar with the Air Force system acquisition process; therefore, it does not review terminology or the system acquisition process. Second, this guide is based on regulations that were current as of the date of writing. Since regulations and policies change, the user should always review current guidance. To assist the user in this, the author included a reference list in each chapter of the guide which lists the regulations used in developing the guide.

Although the author believes a sound acquisition strategy can be developed within the framework of existing regulations, there are three initiatives which he believes would improve the acquisition strategy planning process. First, Air Force and Air Force Systems Command regulations should be revised in the area of acquisition strategy requirements. The author's suggested revisions are included in Chapters 2 and 3. Second, in the author's opinion, a helpful project would be to develop an AFSC pamphlet on acquisition strategy, using this guide as a starting point. Last, if the author's suggestion for using micro-computers is accepted, future efforts should be directed at developing needed software.

In summary, the acquisition process is complex, extends over a long period, and is expensive. The research, development, test and evaluation (RDT&E), and acquisition of Air Force weapon systems consumes a high percentage of the Air Force budget. For example, in FY 1983, approximately 52% of the budget was set aside for RDT&E and acquisition of Air Force equipment. (2:19-21) With such a large number of dollars involved, there is a potential opportunity for big savings. Not only is this an opportunity, but the American public deserves the most efficient and cost effective acquisition of weapon systems as is possible. Yet fewer than two percent of Air Force personnel are directly involved in managing Air Force acquisition programs (4:2) and in trying to extract these

Program stability

- Program stability is defined as the ability to execute a program according to plans. In other words, develop a good program plan at the beginning by developing a sound acquisition strategy and then manage the program to the strategy. All program office personnel must clearly understand the program goals and objectives. This includes a clear understanding of the importance of tailoring specifications and standards, using commercial standards, limiting data requirements, and so forth.

- A sound program baseline (cost, schedule, performance, configuration, etc.) is a key to program stability. Establish a baseline at the program outset and then manage to the baseline. The baseline should not change unless direction is provided, along with funding and schedule relief if required.

PART THREE - REFERENCES

AFSCR 27-1, "Program Direction," 7 Feb 80.

AFR 57-1, "Statement of Need (SON)," 12 Jun 79 (there is a new one in draft).

AFSCR 57-2, "Modification Management," 13 Oct 82.

AFR 57-4, "Modification Program Approval and Management," 23 May 83

AFR 800-2, "Acquisition Program Management," 13 Aug 82. AFSC Supplement 1, 3 Jan 83.

AFSCR 800-2, "Management of Multi-Service Systems, Programs, and Projects," 4 Sep 73.

AFSCR 800-5, "Support Equipment Acquisition Management," 15 Sep 83.

AFR 800-10, "Management of Multiservice and Agency Systems, Programs and Projects," 5 Jul 78.

AFR 800-12, "Acquisition of Support Equipment," 20 May 74.

AFR 800-27, "Development and Use of Non-Government Specifications and Standards," 15 Mar 79.

AFR 800-29, "Application of Specialized Management," 11 Feb 82.

Concept exploration

- Do not restrict concept exploration to contractors. Government laboratories, federally funded research centers, and colleges and universities can all contribute to the concept exploration phase, either at the system or subsystem/bread board level. The concept can later be transitioned to industry.

Program direction

- Is the program direction (the Program Management Directive and AFSC Fm 56) clear? Do you understand the requirements and program objectives?

- Can you meet directed schedules?

- Is the funding sufficient to achieve the directed program?

- If you have questions in any of these areas, work with Hq AFSC to resolve the problem areas.

Decision points and documentation requirements

- When will milestone decision points be reached and briefed? Document the decision points in the milestone chart discussed in Section 26.

- For "less than major" programs, state who the program decision authority is and describe the documentation requirements.

Joint program discussion

- If this is a joint program, are the responsibilities of the other participants clearly defined in the implementing directives? If not, work with Hq AFSC to obtain clear direction.

- Is there a memorandum of understanding/agreement (MOU/MOA) with the other participants? If not, when will there be one? If there is a MOU/MOA, is it current? Who in the program office is responsible for the MOU/MOA?

Discuss related efforts

- Briefly describe current or past exploratory efforts at system definition conducted in labs, at government test facilities, or by contractors.

Chapter Four

STATEMENT OF NEED - SECTION 1

PART ONE - ACQUISITION PLAN REQUIREMENTS

Introduce the plan by a brief statement of need. Summarize the technical and contractual history of the acquisition. Discuss feasible acquisition alternatives and any related in house effort.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Mission requirements

- It is important to clearly establish the essential performance requirements in terms of operational mission requirements. Clear mission requirements impact warranty provisions, an area receiving more attention. See Section 20 for discussion of warranties.

- Early on do not preclude alternative solutions. Ensure the mission need is not built to a specific solution. Rather, the mission need should emphasize operational suitability/ operational effectiveness type requirements. Coordinate closely with the user in these areas. Do not be afraid to challenge the user to eliminate "gold plate" requirements.

- Provide reference to the Justification for Major System New Start (JMSNS) and/or Statement of Need (SON).

- Briefly describe the system operational concept (SOC) and provide the SOC reference. A sound operational concept is essential to design a supportable system. The operational concept must be based on the expected threat and operational mission requirements. The SOC must address basing and support requirements. If it does not, the user must define these areas.

- Define transportability requirements in the operational concept. Examples of transportability requirements are the C-17 main battle tank interface or the capability to airlift a helicopter on a C-130 size aircraft.

NOTE: Chapters 4-30 provide a format for developing an acquisition strategy. Each chapter, referred to as a "Section," is in three parts. Part One is the acquisition plan requirement extracted directly from Part 7 of the Federal Acquisition Regulation (FAR), including references to other parts and sub-parts of the FAR. Part Two consists of additional issues the author believes should be considered in developing the acquisition strategy. These issues are a compilation of considerations from multiple and diverse sources, including regulations, policy letters, and current periodicals. In most cases, due to the diverse sources, specific references are not provided for the considerations listed. Part Three identifies some of the applicable regulations and current writings on the topics covered. These are provided for further research if desired by the program manager or project officer. The following chapters can be removed from this paper and used as an "Acquisition Strategy Guide."

In summary, the acquisition strategy forms the overall conceptual basis followed by a program office to achieve all program goals. The author's "Acquisition Strategy Guide" provides a "checklist" of considerations that must, as a minimum, be addressed as part of the acquisition strategy planning process. Not all the considerations will be applicable at any one point in the planning process. Therefore, the guide really provides a long term "to do" list. The guide also provides suggested areas for further research if additional information is needed. By exploiting the Air Force's new micro-computer capability, the writing and communicating process can be greatly simplified. If the overall conceptual strategy is well thought out and communicated, then some savings in the acquisition of Air Force systems should be achieved.

The current AFSC DAR Supplement also provides an outline for the acquisition strategy. (6:para 1-2102) Although different in some respects, the list covers basically the same topics as the FAR outline. The author developed his "Acquisition Strategy Guide" using the FAR outline, anticipating an update to the AFSC DAR Supplement. Ultimately, either outline will work; the key is to use some guide to produce a comprehensive acquisition strategy. As the Acquisition Strategy Workshop noted,

> The planning phase of our acquisition strategy development process is the critical part of the process....The acquisition strategy for a program is the conceptual framework for conducting the acquisition of the system to be acquired. It reflects decisions about broad objectives and conceptions, which determine how the system will be developed, produced, and supported. It is the integrating mechanism against which functional plans and business considerations are planned. (12:7)

The author's approach, then, uses the FAR acquisition plan outline as the basis for his "Acquisition Strategy Guide." Chapters 4-30 of this paper are the guide. Each chapter is a major area of the FAR acquisition plan, as listed above. Each chapter is referred to as a "Section" in the guide. Each "Section" is broken down into three parts. Part One details the acquisition plan requirements as specified in the FAR. Part Two provides additional considerations the program manager should address in developing an acquisition strategy. However, these considerations are by no means all inclusive of all the issues which are important. Part Three provides both authoritative and contemporary sources for additional information and could be used to establish a basic program office library. Again, this reference list is not all inclusive.

To assist the program manager in writing the acquisition strategy, the author suggests exploiting the recent acquisition of Z-100 micro-computers. Specifically, the "Acquisition Strategy Guide" in Chapters 4-30 could be placed on an "AFSC Acquisition Strategy Guide" program master disk. The program manager could then develop a tailored "acquisition strategy disk" from the master. The tailoring would be based on many factors, including the phase of the program and the type of program. By using the computer's word processing capability, changes could easily be incorporated and/or additions could be made as necessary. An AFSC pamphlet would provide guidance on how to use the "AFSC Acquisition Strategy Guide" master program. This approach could also provide the basis for electronic transfer to other program participants and Hq AFSC if this type of capability evolves.

provide "...a communications tool. It is a process whereby each of the functional entities can communicate their needs to each other." (13:7)

To provide a broad, overall approach and to fulfill the purposes noted, the acquisition strategy must cover many areas. Defense Acquisition Circular (DAC) 76-43 provides an encompassing description of these areas. First, the acquisition strategy should reflect management concepts to be used in directing and controlling all elements of the acquisition to achieve the program goals and objectives (performance, cost, schedule, training, supportability). Second, the acquisition strategy must be tailored to the program, reflect management concerns, and cover the entire process. Last, the acquisition strategy should evolve and become increasingly more detailed in defining the interrelationships of management, technical, business, resource, force structure, support, testing, equipment standardization, and other program aspects. (9:11-12)

As the strategy relates to AFSC programs, AFSC Supplement 1 to AFR 800-2 references DAR 1-2100 (now FAR Part 7). (7:para 21) FAR Part 7 specifically lists the following as major areas to be included in the acquisition strategy or plan:

- Statement of need
- Applicable conditions
- Cost
- Capability or performance
- Delivery or performance-period requirements
- Trade-offs
- Risks
- Sources
- Competition
- Source-selection procedures
- Contracting considerations
- Authority for contracting by negotiation
- Budgeting and funding
- Product descriptions
- Priorities, allocations, and allotments
- Contractor versus government performance
- Management information requirements
- Make-or-buy
- Test and evaluation
- Logistics considerations
- Government-furnished property
- Government-furnished information
- Environment considerations
- Security considerations
- Other considerations
- Milestones for the acquisition cycle
- Identification of participants (11:para 7.105)

It is interesting to note the Army experienced the same problem. In a 1981 Army study on acquisition strategy, one of the findings was "...much confusion between Army terminology and Section 1-2100 of the DAR (this section of the DAR was the acquisition plan prior to publication of the FAR)." (16:6)

With the publication of the FAR, the term procurement plan is no longer used and some of the past confusion may be eliminated. However, the term acquisition plan is still used and many individuals still think of the acquisition plan as a "procurement plan" and not as an "acquisition strategy." To clear up this confusion and misperception, AFSC Supplement 1 to AFR 800-2 should be revised. This revision should clearly address responsibilities, timing, and purpose of the acquisition strategy as outlined in this paper. In addition, the business strategy panel requirements should be integrated with the acquisition strategy requirements in the AFSC Supplement to AFR 800-2. In this integration, the term "Business Strategy Panel" should be changed to "Acquisition Strategy Panel."

In a revision, how should acquisition strategy be defined? The definition should be simple and straightforward. For example, the FAR defines the acquisition strategy as the "...program manager's overall plan for satisfying the mission need in the most effective, economical, and timely manner." (11:para 34.004) In essence, acquisition strategy is simply a "road map" of the acquisition process.

Drawing a parallel with military strategy, the acquisition strategy is an overall approach to achieve broad program objectives much the same as military strategy is an overall approach to achieve broad national objectives. The day-to-day tactics to implement the acquisition strategy are in the program management plan (as defined in AFSCP 800-3), the same as military tactics to implement a military strategy are in the operations plan.

In a sense, the purpose of the acquisition strategy is an extension of the definition. The purpose, according to the FAR, is to provide a

> ...process by which the efforts of all personnel responsible for an acquisition are coordinated and integrated through a comprehensive plan for fulfilling the agency need in a timely manner and at a reasonable cost. It includes developing the overall strategy for managing the acquisition. (11:para 7.101)

Another purpose of acquisition strategy planning, as discussed in the Acquisition Strategy Workshop minutes, is to

Chapter Three

DEFINITION, PURPOSE, AND SPECIFICS

The Defense Systems Management College (DSMC) "...has been pursuing an activity to improve the understanding of the term 'acquisition strategy'." (13:13) The author believes the lack of a common definition causes part of the problem of understanding acquisition strategy. This chapter examines the evolution of this problem and suggests a solution. This chapter also explains the purpose of the acquisition strategy and provides specific details on what the acquisition strategy should cover.

AFSC Supplement 1 to AFR 800-2 states, "The PM's (program manager's) acquisition strategy will be the acquisition plan (DAR 1-2100 (now FAR Part 7)), modified to meet individual program needs." (7:para 21) This reference, in the author's opinion, caused much of the confusion within the Air Force acquisition community on the understanding of acquisition strategy. The confusion arose because three terms were used interchangeably in AFSC Supplement 1 to AFR 800-2, the DAR (before becoming the FAR), and the AFSC DAR Supplement. These terms were acquisition strategy, acquisition plan, and procurement plan. The problem this created was the acquisition strategy was perceived to be a "contract thing" and not a "program plan." The AFSC DAR Supplement contributed to this perception by having the contracting officer sign the acquisition plan. (6:para 1-2102(b)) Further, the AFSC DAR Supplement did not discuss the program manager's responsibilities.

AFSCR 70-2 added to the confusion by introducing the term "business strategy." As noted in Chapter 2, this regulation requires the convening of a Business Strategy Panel (BSP) to discuss the program acquisition strategy. (5:para 1) The terms "business strategy" and "acquisition strategy" are used synonymously here. Further, the BSP topics are somewhat different than the acquisition strategy requirements in the FAR. Another confusion factor is AFSCR 70-2 is a contracting series regulation. Thus, this regulation added to the perception that the contracting officer was responsible for the business or acquisition strategy.

The evolutionary nature of the development process introduces the issue of currency and updates to the acquisition strategy. Section 26 of the "Acquisition Strategy Guide" (Chapter 29), specifically addresses this issue. Basically, though, the project officer (or program manager if there is no project officer) is responsible for keeping the acquisition strategy current.

However, in the author's opinion, at least quarterly the program manager should sit down with the program team and go through the strategy to make sure the program office personnel understand the strategy. Periodic program reviews are not a new concept to the program office, and the level of detail and review does not have to be great. For those areas where greater detail is required, follow-on, specific area reviews should be conducted.

In addition to keeping the strategy current, these reviews would provide a benefit for the program manager. An Air Command and Staff College study on acquisition status briefings within AFSC found program managers were not as familiar with the acquisition strategy details as they should be. (14:13) Periodic reviews would improve the program manager's familiarity.

There is another side benefit to establishing such a review process. This involves transitioning from one program manager to a new one. A program review of this nature during the transition would be extremely helpful for the new program manager to understand the program acquisition strategy.

This chapter documented the program manager's responsibility for developing the acquisition strategy and addressed the help available. It also highlighted the conflicts in the regulations regarding the time frame for developing the acquisition strategy and suggested a possible solution. The level of detail required at various program phases and a general approach for developing the acquisition strategy were also addressed. And last, this chapter discussed the issue of keeping the strategy current along with the benefits that accrue from planned program reviews. The next chapter defines the term acquisition strategy, discusses the purpose of the acquisition strategy, and provides specifics of information to be included in an acquisition strategy.

identified, preferably well in advance of the fiscal year in which contract award is necessary." (11:para 7.104)

The confusion is compounded by AFSCR 70-2. This regulation requires the convening of a Business Strategy Panel (BSP) "...to discuss acquisition strategies before the program office chooses a specific strategy." (5:para 1) So for "major" programs, according to this regulation, a BSP must be convened before the JMSNS can be developed.

The program manager is in a quandary. In the author's opinion, this confusion can be easily eliminated by deleting the phrase "after program initiation" from AFR 800-2. Then the Air Force and AFSC regulations and DOD directives would provide consistent direction.

From this discussion, it should be apparent that the basic strategy must be developed as early in the program as possible. The next issue involves the required level of detail for the acquisition strategy at the various program phases.

The JMSNS format limits the acquisition strategy, submitted in the POM, to one paragraph. This paragraph should address competition during the life of the program, overall program schedules, types of contracts, and other major issues. Although the acquisition strategy in the JMSNS is limited, much back-up is necessary to write this one paragraph. One example is the acquisition strategy developed by ASD/XR for the Long Range Combat Aircraft (LRCA). (18:--)

The post-Milestone 0 (program initiation point) strategy greatly expands on the basic acquisition strategy elements in the JMSNS. A project officer should be assigned overall responsibility for the acquisition strategy. In the early stages of development, the project officer must work very closely with the program manager (PM). In fact, the PM could initially serve as the project officer to get things started. In the case of a small program, this is naturally the situation. The actual acquisition strategy development is a team effort, however, with functional experts involved. The team must also include representation from the operating command as well as the logistics and training communities.

As discussed in the next chapter, the "Acquisition Strategy Guide" in Chapters 4-30 can serve as the basis for developing both the initial JMSNS strategy and the more detailed program acquisition strategy. As the program progresses, the information relating to the considerations and issues raised in the guide will become more detailed. Thus, the acquisition strategy evolves as the program progresses.

reference to the FAR, states,

> The program manager, as specified in agency procedures, shall develop an acquisition strategy tailored to the particular major system acquisition program.... (11:para 34.004)
> * * * * * * *
> In developing the plan (acquisition plan), the planner (program manager) shall form a team consisting of all those who will be responsible for significant aspects of the acquisition, such as contracting, fiscal, legal, and technical personnel. (11:para 7.104)

The AFSC Supplement to the FAR (still published as a DAR supplement) adds some additional guidance on team members and inputs to the plan, requiring that the "logistics community" be solicited for input. This supplement also suggests including a small business specialist on the team. (6:para 1-2100.4)

AFR 800-2 provides guidance on another important aspect of assistance. According to this regulation, the implementing command will develop the acquisition strategy "...with the input and coordination of participating commands." (8:para 21) The Program Management Directive (PMD) specifies the implementing and participating commands.

Thus, although the program manager is responsible for the overall development of the acquisition strategy, there are a lot of people who should be helping. This, of course, is the basis of the system program office organization.

The next question is, when should the strategy be developed? For a "major" system, as defined by DODD 5000.1, a Justification for Major System New Start (JMSNS) is submitted with the Program Objective Memorandum (POM) prior to program initiation. (12:para 12a) The Secretary of Defense's approval of the POM provides program initiation authority. The JMSNS format, as specified in DODD 5000.2, requires a discussion of the salient elements of the proposed acquisition strategy. (8:28) Thus, the DOD directives, which are attached to AFR 800-2, require the initial acquisition strategy development prior to program initiation. However, AFR 800-2 states the acquisition strategy will be developed by the program manager "...after program initiation." (8:para 21) The Air Force regulation and DOD directives, therefore, contradict each other on when the acquisition strategy must be developed.

Part 7 of the FAR adds to this confusion by directing the early start of the acquisition strategy. The FAR states, "Acquisition planning should begin as soon as the agency need is

Chapter Two

RESPONSIBILITIES, TIMING, DETAIL, AND CURRENCY

One of the indirect issues raised during the Acquisition Strategy Workshop involved responsibilities in preparing the acquisition strategy. (13:8) Other issues discussed were the development time frame, level of detail, and currency of the acquisition strategy. (13:19) This chapter addresses these issues.

Before getting into the issues, however, it is necessary to understand the relationship of the regulations that apply to acquisition strategy. The primary regulation is AFR 800-2, "Acquisition Program Management." AFR 800-2 implements Department of Defense Directives (DODDs) 5000.1 and 5000.2 and includes these directives as attachments. These DODDs are the DOD guidance on systems acquisition programs. For Air Force Systems Command (AFSC) acquisition programs, the focus of this paper, AFSC Supplement 1 to AFR 800-2, "Program Management," applies. The AFSC Supplement makes reference to Parts 7 and 34 of the Federal Acquisition Regulation (FAR). (The FAR replaced the Defense Acquisition Regulation (DAR) that the AFSC Supplement specifically references. Therefore, throughout this paper, the author references the FAR although the AFSC regulation refers to the DAR.) There is also an AFSC DAR Supplement (an AFSC FAR supplement has not been published yet). With this brief background on the relationship of the applicable regulations, the acquisition strategy issues can now be discussed.

As in all issues dealing with an acquisition program, the program manager has the ultimate responsibility. Responsibility for the acquisition strategy is no exception. AFR 800-2 leaves no doubt about this, stating, "Each program manager must develop an 'acquisition strategy'...." (8:para 21) Further, the program manager "Makes management decisions...equally weighing cost, schedule, performance, supportability, and training requirements." (8:para 5c) These "management decisions" form the essence of the acquisition strategy.

AFSC regulations also affirm the program manager's responsibility for the acquisition strategy and provide guidance on who should help. AFSC Supplement 1 to AFR 800-2, through its

savings. A sound acquisition strategy is paramount to best employ these limited manpower resources and solve the problems a program manager faces. The remainder of this paper explains how a sound acquisition strategy can be developed.

Rand Report N-1985-1-AF, "Increasing Future Fighter Weapon System Performance by Integrating Basing, Support, and Air Vehicle Requirements," Apr 83.

Program Manager, Nov-Dec 83, "'Buy one plane and let the pilots take turns flying it.'," Robert T. Marsh, General, USAF (Retired), page 2.

Program Manager, Nov-Dec 83, "The Defense Acquisition Improvement Program," G. Dana Brabson, Colonel, USAF (Retired), page 5.

Program Manager, Nov-Dec 83, "Program Instability: Fighting Goliath," William D. Brown, Lieutenant Colonel, USA, page 30.

Program Manager, Mar-Apr 84, "Program Stability Perspective for the Program Manager," William D. Smith, Lieutenant Colonel, USAF, page 24.

Chapter Five

APPLICABLE CONDITIONS - SECTION 2

PART ONE - ACQUISITION PLAN REQUIREMENTS

State all significant conditions affecting the acquisition, such as (i) requirements for compatibility with existing or future systems or programs and (ii) any known cost, schedule, and capability or performance constraints.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Description of associated materials and services

- Are new facilities required or are modifications to existing facilities necessary (MX silos or new maintenance facilities for example)?

- Are these facilities funded under this program or separately? If funded separately, identify the program element and appropriation.

- Are other subsystems being developed to support this program as government furnished equipment (GFE)--engines or avionics for example? Is system peculiar support equipment being developed to support the program? In either case, this requires close coordination with the responsible program office.

International defense cooperation program

- If this is an international program, DODD 2010.6 requires reports on NATO Rationalization, Standardization, and Interoperability (RSI).

- Are there plans to consider NATO or other countries' developments as solutions during the concept exploration phase? If not, why not?

- If this is a joint NATO program, follow the Conference of National Armaments Directors Handbook on the NATO Periodic Armaments Planning System.

- Is a "buy American" waiver required? If so, state here and give details in Section 11.

- What are the provisions for R&D cost sharing?

- What are the plans for a MOU/MOA? The F-16 and NATO AWACS programs provide examples of international MOU/MOAs.

- Discuss any plans for future joint NATO logistics efforts.

Standardization and interoperability in engineering design

- Can other services' systems or subsystems be used? Munitions, avionics and support equipment are examples.

- Can commercial products be used?

- An open mind regarding standardization and interoperability can set the tone for the program office. This can help battle the "not invented here syndrome" and save development costs.

- Remember NATO RSI for fuels, munitions, or subsystems.

- Plan to demonstrate standardization during the validation phase as well as in the following phases.

- Emphasize the use of standard design practices wherever possible, including the use of commercial specs and standards, Aeronautical Radio Incorporated (ARINC) standards, or form, fit, and function standards.

Operational deployment conditions

- If the conditions for wartime operational deployment are different than routine peacetime conditions, the system operational concept (SOC) must reflect these conditions-- i.e., level and type of support, time factors for deploying and setting up operations, etc. Section 1 discusses other aspects of this area.

Threat

- Is the threat validated? Is the threat current?

- Have you considered the impact of actual or potential threat changes relative to program goals and mission requirements?

- Have you established needed intelligence information requirements?

- Have you identified the critical intelligence parameters (CIPs)?

PART THREE - REFERENCES

AFR 73-3, "Standardization and Interoperability of Weapon Systems and Equipment in the North Atlantic Treaty Organization (NATO)," 10 Mar 81.

AFR 73-6, "International Military Standardization Programs," 18 Aug 80.

AFSCR 80-11, "Intelligence Requirements," 14 Jun 84.

AFR 80-15, "Participation in Certain NATO Groups on Research, Development, Production, and Logistic Support of Equipment," 10 Dec 76. AFSC Supplement 1, 25 Apr 77.

AFR 80-21, "Cooperation with other Countries in Research and Development (R&D) of Defense Equipment," 27 Jan 64. AFSC Supplement 1, 23 Nov 73.

AFSCR 200-3, "Threat Management for Systems Acquisition," 8 Nov 79.

AFR 200-24, "Request for Collateral Intelligence Documents," 17 Jan 84. AFSC Supplement 1, 14 Jun 84.

AFSCP 207-1, "Systems Security Engineering (SSE) Management," 1 Jun 82.

AFR 800-12, "Acquisition of Support Equipment," 20 May 74.

AFR 800-28, "Air Force Policy on Avionics Acquisition and Support," 11 Sep 78.

Rand Report, R-2861-AF, "Multinational Coproduction of Military Aerospace Systems," Oct 81.

Chapter Six

COST - SECTION 3

PART ONE - ACQUISITION PLAN REQUIREMENTS

Set forth the established cost goals for the acquisition and the rationale supporting them, and discuss related cost concepts to be employed, including as appropriate, the following items:

(i) Life-cycle cost. Discuss how life-cycle cost will be considered. If it is not used, explain why. If appropriate, discuss the cost model used to develop life-cycle cost estimates.

(ii) Design-to-cost. Describe the design-to-cost objective(s) and underlying assumptions, including the rationale for quantity, learning-curve, and economic adjustment factors. Describe how objectives are to be applied, tracked, and enforced. Indicate specific related solicitation and contractual requirements to be imposed.

(iii) Application of should-cost. Describe the application of should-cost analysis to the acquisition (see 15.810).

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Design-to-cost (DTC) requirements

- Establish firm DTC figures by Milestone II.

Life-cycle costs (LCC)

- Operations and support (O&S) costs are about 60% of LCC. Early, intelligent decisions on support concepts can reduce O&S costs.

- 85-90% of LCC costs are determined by the end of the demonstration-validation phase. Therefore, identify factors that drive cost and do whatever is possible to reduce these costs early in the design process while you still have an opportunity. LCC models can help identify sensitivities and cost drivers.

- Perform the initial LCC study during the concept exploration phase. Establish LCC estimates by Milestone I.

- Provide updated LCC estimates at Milestones II and III.

- Competitive contract awards can be based in part on life-cycle costs rather than solely on acquisition costs. See Section 10 for additional information.

- Life-cycle cost efforts are vital and must be given proper attention. Section 6 provides other information relative to this area.

Application of should-cost

- Should-cost analyses can help determine if a system is "worth" the estimated cost. This technique is not always applicable, but you should at least consider it.

Affordability

- System affordability must be a prime decision factor in the concept exploration phase. In other words, can the system be bought within the projected budgets and are the O&S costs affordable?

Independent cost analyses

- Independent cost analyses must be done prior to major milestone decision points.

PART THREE - REFERENCES

AFR 70-5, "Should Cost," 19 Sep 79.

AFR 173-1, "The Air Force Cost Analysis Program," 10 Oct 75.

AFR 173-2, "Economic Escalation," 8 Feb 80.

AFR 173-11, "Independent Cost Analysis Program," 12 Dec 80.

AFR 800-11, "Life Cycle Cost Management Program," 27 Jan 84.
AFSC Supplement 1, 26 Oct 79.

AFSCP 800-19, "Joint Design-to-Cost Guide Life Cycle Cost as a Design Parameter," 15 Oct 77.

AFR 800-30, "Life Cycle Management of Aeronautical Gas Turbine Engines," 14 Apr 80.

Chapter Seven

CAPABILITY OR PERFORMANCE - SECTION 4

PART ONE - ACQUISITION PLAN REQUIREMENTS

Specify the required capabilities or performance characteristics of the supplies or services being acquired and state how they are related to the need.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Goals, thresholds, and objectives

- Establish goals and thresholds and obtain approval from the appropriate decision authority. The following areas require program goals:
  - -- cost,
  - -- schedule,
  - -- performance,
  - -- readiness,
  - -- and supportability.

- The approved goals must provide full satisfaction of mission needs. If they don't, either the mission need statement or the goals must be amended.

- Clear goals are essential for warranty enforcement. See Section 20.

- Thresholds describe minimum performance and maximum cost levels. You must notify the decision authority if thresholds are breached as soon as the condition is known.

- Discuss any trade-offs made in setting the goals and thresholds.

- For historical purposes, describe approved changes in goals and thresholds and the reason for the change.

- Are cost, schedule, performance, training and supportability objectives well understood?

- Sections 1 and 7 include other considerations that apply to this area.

Plans for Preplanned Product Improvement (P^3I)

- Discuss plans for the system is to evolve through P^3I.

- Another approach closely allied to P^3I is incremental development. Examples of this approach are the F-5, F-15, and F-16.

PART THREE - REFERENCES

AFR 57-4, "Modification Program Approval and Management," 23 May 83.

AFR 800-2, "Acquisition Program Management," 13 Aug 82. AFSC Supplement 1, 3 Jan 83.

Rand Report, N-1794-AF, "Preplanned Product Improvement and Other Modification Strategies: Lessons Learned from Past Aircraft Modification Programs," Dec 81.

Program Manager, Nov-Dec 83, "Tied up in Knots Trying to Do P^3I," James S. Knox, Captain, USAF, page 33.

Chapter Eight

DELIVERY OR PERFORMANCE PERIOD REQUIREMENTS - SECTION 8

PART ONE - ACQUISITION PLAN REQUIREMENTS

Describe the basis for establishing delivery or performance period requirements (see Subpart 12.1). Explain and provide reasons for any urgency if it results in concurrency of development and production or constitutes justification for noncompetitive procurement.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Basis for establishing delivery requirements

- Describe how the required delivery dates were determined for both R&D and production assets. Delivery requirements should be based on established operational need dates.

- Describe the justification for concurrency if it is planned. Again, this should be based on operational need. Concurrency is not a "dirty" word to paraphrase Deputy Secretary of Defense Thayer. (Program Manager, Mar-Apr 83, pg 3)

- Discuss concurrency and its impact on program risk in Section 7.

- Concurrency usually requires additional "up front" money to fund accelerated testing and production schedules. Address this requirement in Section 13.

- Provide justification for urgency if it dictates noncompetitive procurement. This must also be addressed in Sections 9, 11, and 12.

Economical production rates

- Are operational need dates consistent with economical production rates? Explore possible trade-offs so the most economical rate consistent with need can be achieved.

- Are planned production rates consistent with production facilities, tooling, manpower, etc.? This assessment is part of the production readiness review. See Section 25.

- Unstable or uneconomical production rates can impact cost and schedule risks. Do cost estimates and schedule risk assessments take potential impacts into account?

- If economic production rates are not being used, explain why.

- If this program supports another acquisition program, are production rates consistent with the requirements of the program being supported?

- If government furnished equipment (GFE) is being used, do the GFE delivery schedules support the program production requirements?

Production surge capabilities

- Can production be surged if required?

- What is the impact of a production surge on cost, support, testing, performance, etc.?

- What are the factors that limit a production surge,
  -- materials,
  -- manpower,
  -- subsystems,
  -- facilities/equipment,
  -- or other factors?

- Are there ways to alleviate these limiting factors?

- Could a second contractor provide additional surge capability? This could also enhance competition.

Readiness

- Will end item delivery schedules exceed the capabilities of the field units to absorb the equipment? For example, will training be done, spares be available, and support equipment be provided by the time the system reaches the field? Sometimes these situations may be unavoidable, but the decision should be thought out.

- Have funds been budgeted to ensure field facilities will be ready and can support system delivery?

Delivery reporting requirements

- Is an appropriate delivery reporting mechanism set up?

Site activation

- Establish site activation teams and integrate their activities into the program schedule. Site surveys must be scheduled so findings and recommendations can be acted on in time to support initial operational capability dates.

PART THREE - REFERENCES

AFR 78-10, "Industrial Base Program Planning," 20 Apr 84.

AFR 84-8, "Reports on Production of Aircraft, Missiles, and Engines - RCS; HAF-RDG(M)7102," 26 Aug 74. AFSC Supplement 1, 29 Apr 81.

AFR 800-9, "Manufacturing Management Policy for Air Force Contracts," 8 Nov 83.

AFSCR 800-11, "Site Activation/Alteration Task Forces (SATAF)," 28 Mar 73.

Program Manager, Mar-Apr 83, "The PM's Role in Surge and Mobilization Capability," Jerry C. Harrison, Colonel, USA, page 17.

Program Manager, May-Jun 83, "Acquiring Systems at Economic Production Rates," David D. Acker, page 6.

Program Manager, May-Jun 84, "Getting Serious about Industrial Base Planning," O.M. Collins, Lieutenant Colonel, USAF, page 28.

Chapter Nine

TRADE-OFFS - SECTION 6

PART ONE - ACQUISITION PLAN REQUIREMENTS

Discuss the expected consequences of trade-offs among the various cost, capability or performance, and schedule goals.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Trade-offs

- Trade-offs must be balanced throughout the life of the program. Trade-offs can help alleviate risk and should be carefully considered.

- Trade-offs in performance and schedule must be coordinated with the user. Try to have the user identify areas that are absolute, i.e., where no trade-offs can be made.

- Trade-offs can also play a part in reducing life-cycle costs if explored, developed, and coordinated with the user early in the program.

- The best time to make trade-offs is before specifications become expensive to change. In other words, accomplish trade-off studies and implement the results as early as possible in the program. In doing trade-off studies, look for design sensitivities--these may be the high risk and/or high payoff areas.

- Also consider logistics analyses in the trade-off studies. For example, with the user, explore different maintenance level concepts, e.g., two versus three level. A decision factor in this example is the wartime deployment requirement.

Sections 4, 7, and 20 address other areas that involve trade-offs.

PART THREE - REFERENCES

AFSCP 800-19, "Joint Design-to-Cost Guide Life Cycle Cost as a Design Parameter," 15 Oct 77.

Program Manager, Jan-Feb 84, "Balancing on the Technical Manager's Tightwire," Wilbur V. Arnold and Richard M. Stepler, page 24.

- Explain any differences in cost estimates determined by the different techniques.

- For early program estimates, one technique to help account for risks is to band uncertainties.

- Assess the sensitivity of estimates to different inflation assumptions, production rates, funding profiles, and so forth.

- Have you considered cost, schedule, performance, and supportability trade-offs in developing the estimates? This is especially important early in the program when significant life-cycle cost savings can be achieved.

- Have you planned for an independent cost estimate? If not, why not?

Outyear budget changes

- Is the program on the Air Force "stable program list"?

- Consider impacts on program cost that could be created by outyear funding changes. This includes such things as impact on performance, delivery, ability to achieve initial operational capability (IOC), supportability, etc.

- What are the production alternatives if the outyear funding changes?

Budgets

- Has the budget been developed for the most likely cost or does it reflect a "buy-in" estimate?

- Have you budgeted funds for identified risks?

- Have funds for unknown risks been included in the budget? See Section 7 for further discussion on risk factors.

- Are funds identified in the FYDP and extended planning annex to pay for the program? In other words, is the program affordable or is there a funding shortfall in the outyears?

Economic escalation

- What inflation factors were used in developing the cost estimate? Are they realistic? If not, follow published guidelines to develop factors that are reasonable and then obtain permission to use them.

Chapter Sixteen

BUDGETING AND FUNDING - SECTION 13

PART ONE - ACQUISITION PLAN REQUIREMENTS

Describe how budget estimates were derived and discuss the schedule for obtaining adequate funds at the time when they are required (see Subpart 32.7).

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Identify program elements (PE)

- Identify all PEs and appropriations (R&D, military construction, and operations for example).

- For each PE and appropriation, explain any differences between the following:
  -- Five Year Defense Program (FYDP),
  -- Program Objective Memorandum (POM),
  -- and the President's budget.

Estimated costs for all contracts

- Separately list, by PE and appropriation, the following:
  -- conceptual phase contract costs,
  -- demonstration and validation phase contract costs,
  -- full scale development phase contract costs,
  -- estimated production unit cost,
  -- total cost for remaining production,
  -- estimated total contract costs,
  -- and for completed contracts show actual costs vs estimates.

Estimates

- What method was used to determine estimated costs--contractor, program office, or independent cost estimate? What estimating techniques were used (grass-roots, top down, parametric, etc.)?

Chapter Fifteen

AUTHORITY FOR CONTRACTING BY NEGOTIATION - SECTION 12

PART ONE - ACQUISITION PLAN REQUIREMENTS

If contracting by negotiation is contemplated, cite the authority (see Subpart 15.2) for using negotiation and discuss the basis for selecting that particular authority. If a D&F (determination and finding) to justify negotiation will be required (see Subpart 15.3) and the acquisition plan will be used to support that D&F, provide the information needed.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Program manager responsibilities

- Although the contracting officer prepares the D&F, you must work very closely with him to ensure your overall philosophy and approach is followed.

- The D&F preparation schedule must be in consonance with the overall program schedule. Consider the D&F approval cycle in developing the schedule, particularly if the D&F requires high level approval.

NOTE: The Competition in Contracting Act of 1984 eliminates the requirement for a D&F to obtain authority for contracting by negotiation. This change is effective 1 April 1985. These considerations are included in the event some other requirement replaces the D&F. If there is no new requirement, this Section is not applicable.

PART THREE - REFERENCES

Federal Acquisition Regulation, 1 Apr 84.

PART THREE - REFERENCES

AFP 70-1-5, "Department of Defense and NASA Incentive Contracting Guide," Oct 69.

AFSCR 70-2, "AFSC Business Strategy Panel," 2 May 80.

AFR 70-16, "Contract Management in Major Program Acquisition," 2 Jan 74.

Rand Report, N-1804-AF, "Multiyear Contracting for the Production of Defense Systems: A Primer," Feb 82.

Program Manager, Mar-Apr 83, "So, What Does the Defense Contractor Really Want?," Dr. Robert F. Williams, page 24.

Chapter Fourteen

CONTRACTING CONSIDERATIONS - SECTION 11

PART ONE - ACQUISITION PLAN REQUIREMENTS

For each contract contemplated, discuss contract type selection (see Part 16); use of multiyear contracting, options, or other special contracting methods (see Part 17); any special clauses, special solicitation provisions, or FAR deviations required (see Subpart 1.4); whether formal advertising or negotiation will be used and why; whether equipment will be acquired by lease or purchase (see Subpart 7.4) and why; and any other contract considerations.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Contract type

- Work closely with your contracting officer to select the most appropriate type contract. Considerations must include program phase, risk, incentives, schedule, etc. Be prepared to provide the rationale for the selected contract type.

- Selection of the most appropriate type contract can enhance program stability. For related considerations in this area see Section 7.

Multiyear contracts

- For stable production programs, it may be possible to use multiyear procurement to reduce costs. This can include the use of multiyear contracts for spares acquired with production assets.

Contractor incentives

- Profit is not the only, nor necessarily the most important, incentive for contractors. See the Mar-Apr 83 issue of Program Manager, page 24, for a discussion of incentive factors.

- Spares acquisition integrated with production (SAIP) can be included in the RFP as something the contractors must bid on.

Statement of Work (SOW)

- Develop the SOW early and carefully review it to make sure it accurately reflects established program goals and objectives.

PART THREE - REFERENCES

AFR 70-15, "Source Selection Policy and Procedures," 22 Feb 84.

AFSCR 70-7, "AFSC Solicitation Review Panel," 2 May 80.

AFSCR 80-15, "R&D Source Selection Policy and Guidance," 31 Dec 74.

AFR 800-9, "Manufacturing Management Policy for Air Force Contracts," 8 Nov 83.

AFR 800-11, "Life Cycle Cost Management Program," 29 Oct 79. AFSC Supplement 1, 26 Oct 79.

AFR 800-26, "Spares Acquisition Integrated With Production (SAIP)," 17 Feb 78. AFSC Supplement 1, 8 Sep 81.

Program Manager, Sep-Oct 84, "The Life-Cycle Cost Factor in Competition," Stuart Platt, Commander, USN, page 42.

Chapter Thirteen

SOURCE-SELECTION PROCEDURES - SECTION 10

PART ONE - ACQUISITION PLAN REQUIREMENTS

Discuss the source-selection procedures for the acquisition, including the timing for submission and evaluation of proposals, and the relationship of evaluation factors to the attainment of the acquisition objectives (see Subpart 15.6).

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Source-selection evaluation plan

- The source-selection evaluation plan must be developed and approved in time to meet program schedule requirements.

- Performance, cost, schedule, and supportability should all receive equal weight in the evaluation. The cost factor can include life-cycle cost and need not be restricted to acquisition cost. Also consider manufacturing capability in the evaluation.

- Close coordination with the user is required to establish operational mission requirements to be evaluated. These requirements must be closely tied to the Statement of Need. You should also coordinate with AFLC and ATC in developing the supportability evaluation factors.

- Try to build follow-on competition and component breakout considerations into the source-selection. These areas could be developed into evaluation factors.

Request for Proposal (RFP)

- Write the RFP and have it approved in time to meet program schedule requirements. Make provisions in the program schedule for the Solicitation Review Board (Murder Board).

- Budget funds for the RFP if necessary.

Program Manager, May-Jun 83, "Second Sourcing: A Way to Enhance Production Competition," Benjamin R. Sellers, Commander, USN, page 10.

Program Manager, Jan-Feb 84, "Competition--If Not Now, Next Time For Sure," Chester D. Taylor, Jr., page 42.

Program Manager, Mar-Apr 84, "Second Source Splits: An Optimum Non-Solution," Brent Meeker, page 2.

Program Manager, Mar-Apr 84, "Will Competition Reduce Cost?," William M. Brueggemann, page 39.

Program Manager, Sep-Oct 84, "Encouraging Competition at the Subcontractor Level," Robert E. Schafrik, Lieutenant Colonel, USAF, page 28.

lessons learned, and get suggestions from institutions like the Defense Systems Management College.

Component breakout

- Component breakout may provide life-cycle cost savings through competition, both during acquisition and system operation. Component breakout must be carefully managed, however, as it can increase integration, quality, and schedule risks. Component breakout also increases the administrative burden. Base the final decision for component breakout on these factors in addition to an economic analysis.

- Component breakout requires high level management emphasis early in the development if the advantages are to be realized.

- Public Law 98-577 addresses component breakout and authorizes the creation of Breakout Procurement Center Representatives in the small business office. Work with these folks and let them help. These organizations have been in operation at the Air Logistics Centers (ALCs) for several years.

Reprocurement data

- Reprocurement data allows follow-on spares and support equipment competition. Work with AFLC to identify the specific requirements for reprocurement data.

- Funding for reprocurement data must be budgeted.

- Reprocurement data involves contract considerations, including proprietary and patent rights. Discuss these considerations in Section 11.

PART THREE - REFERENCES

AFR 57-2, "Joint Procedures for the Qualification and Acceptance of Engine Parts for Alternate Sources of Supply," 3 Oct 73.

AFR 800-35, "Air Force Competition Advocate Program," 12 Oct 84.

Rand Report, R-2058-PR, "Competition in the Acquisition of Major Weapon Systems: Legislative Perspectives," Nov 76.

Rand Report, R-2345-AF, "The Use of Prototypes in Weapon Systems Development," Mar 81.

Chapter Twelve

COMPETITION - SECTION 9

PART ONE - ACQUISITION PLAN REQUIREMENTS

Describe how competition will be sought, promoted, and sustained throughout the course of the acquisition. Discuss component breakout for competition, if applicable. If noncompetitive contracting is being recommended, identify the source and discuss why competition cannot be used. Justification for a noncompetitive acquisition may be referenced and attached to the plan.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Competition

- Part 34 of the Federal Acquisition Regulation requires the program manager to maintain competition in the program as long as is practical. Try to think of new and innovative ways to build competition into the program at the outset and to maintain competition throughout the entire life-cycle.

- Public Law 98-577 requires planning for future competition of spares, support equipment, and support services during the development phase. See Section 8 for additional discussion.

- Some of the current ideas for developing and maintaining competition are:
  - -- dual sourcing,
  - -- second sourcing,
  - -- teaming,
  - -- Chinese copy,
  - -- leader/follower,
  - -- prototypes through the FSD phase with source selection for production,
  - -- and lease versus purchase.

- For the best approach to develop competition for your program, work closely with your contracting officer, look at

Chapter Eleven

SOURCES - SECTION 8

PART ONE - ACQUISITION PLAN REQUIREMENTS

Indicate the prospective sources of supplies and/or services that will meet the need. Consider required sources of supplies and services (see Part 8). Include considerations of small business, small disadvantaged business, and labor surplus area concerns (see Parts 19 and 20). If the acquisition or a part of it is for commercial or commercial-type products (see Part 11), address the results of market research and analysis and indicate their impact on the various elements of the plan.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Small business

- Public Law 98-577 requires contractors to submit proposals which will enhance competition.

- Public Law 98-577 also amends many of the qualification requirements that exist and makes it easier for new contractors to qualify for production, especially to enhance competition. Work with your contracting officer and small business representative to find out how this bill is being implemented.

- For other considerations see Section 9.

PART THREE - REFERENCES

AFSCR 70-8, "Using and Maintaining the AFSC Computerized Small Business Research and Development Source List," 16 May 80.

AFSCR 84-5, "Preparation and Use of AFSC Form 84, Source List," 27 Sep 78.

AFR 800-27, "Development and Use of Non-Government Specifications and Standards," 15 Mar 79.

Risk assessment

- There is a "Risk Assessment Techniques" handbook available from DTIC (AD-A131 596) which provides information on risk assessment techniques. This handbook was developed for project officers responsible for risk assessment. It can provide help in many areas of risk assessment, including:
  -- technical alternative selection,
  -- planning,
  -- POM development/budgeting,
  -- source selection,
  -- acquisition strategy,
  -- and management control.

Threat risk

- Threat assessments and evolving/changing threats need to be considered in risk analysis. Section 2 provides more information on threat.

PART THREE - REFERENCES

AFSCR 800-35, "Independent Schedule Assessment Program," 31 Jan 79.

Program Manager, Sep-Oct 83, "Risk Assessment for Defense Acquisition Managers," Edward G. Ingalls and Peter R. Schoeffel, page 27.

Program Manager, Nov-Dec 83, "'Buy one plane and let the pilots take turns flying it.'," Robert T. Marsh, General, USAF (Retired), page 2.

Program Manager, Nov-Dec 83, "Program Instability: Fighting Goliath," William D. Brown, Lieutenant Colonel, USA, page 30.

Program Manager, Nov-Dec 83, "Riding the Budget Roller Coaster: Strategies for Dealing with DOD Budget Turbulence," Patricia A. Kelley, page 41.

Program instability and cost risk

- Gen Marsh wrote, regarding the AFSC Affordable Acquisition Approach (A^3), "...two basic factors provide the greatest impetus for cost growth: funding shortfalls and program instability." (Program Manager, Nov-Dec 83, page 3)

-- Funding shortfalls have historically required program stretchout and increased cost. Analyze the effects funding shortfalls would have and plan ways to overcome them.

-- Instability results from design, engineering, quantity, schedule or requirements changes, and program funding shortfalls. Establishing and sticking to program baselines can help alleviate some of these problems.

- One of the best ways to enhance program stability is to control cost growth.

- Section 1 also addresses program stability.

Schedule risk

- Discuss any potential impacts on initial operational capability if schedule problems are encountered.

- Are there subcontracts (government or contractor furnished equipment) which could constrain production and cause delays? If so, identify these subcontracts and then monitor them.

- Use independent schedule assessments to assist in schedule risk assessment.

Readiness, maintainability, and supportability risks

- Readiness, maintainability, and supportability are key aspects of all programs. The risks associated with obtaining the required goals in these areas must be addressed.

- If concurrency is planned, consider the impact on supportability, readiness, and training.

- Design the test program to ensure that supportability goals and thresholds are measured. The test schedule for these areas must support the decision milestones.

- Supportability and maintainability must be built into the system and a little up front spending can save a lot in life-cycle costs.

Chapter Ten

RISKS - SECTION 7

PART ONE - ACQUISITION PLAN REQUIREMENTS

Discuss technical, cost, and schedule risks and describe what efforts are planned or underway to reduce risk and the consequences of failure to achieve goals. If concurrency of development and production is planned, discuss its effects on cost and schedule risk.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Technical risk

- Discuss major areas of technical risk and describe efforts to reduce these risks. This could include laboratory tests or other similar efforts.

- Compare test results with program goals and thresholds. Are goals being achieved or thresholds breached or are there indications of possible breaches?

- Have you budgeted for identified technical risks?

- If concurrency is planned, discuss the impact on test schedules and any technical risks concurrency entails.

- DOD research and development centers, government laboratories, and other similar types of organizations can provide independent technical assessments to assist in risk analysis.

Cost risk

- If concurrency is planned, discuss the potential effects on cost.

- Assess the impact on program cost if the contractor's business base changes.

Unfunded requirements

- If program cost growth occurs for some reason, you can seek relief through the unfunded requirements route. You should be aware of this provision and its restrictions.

PART THREE - REFERENCES

AFSCR 27-9, "Programming Unfunded Requirements," 8 May 84.

AFM 172-1, "USAF Budget Manual, Volume 1, Policies and Procedures," 15 May 82. AFSC Supplement 1, 19 Dec 84; 2, 28 Oct 83; 3, 3 Nov 83; 4, 18 Sep 84; and 5, 2 May 84.

AFM 172-1, "USAF Budget Manual, Volume 2, Estimating Instructions," 15 Apr 83. AFSC Supplement 1, 10 Jan 85.

AFSCR 172-2, "Budgeting and Funding for Laboratory Support," 28 Sep 84.

AFSCP 172-5, "Rules of the Road for Financial Management," 7 Jul 83.

AFSCR 172-7, "Budgeting and Funding for Provisioning Data," 5 Aug 75.

AFSCR 172-8, "Budgeting and Funding for Test and Evaluation," 19 Oct 83.

AFR 172-14, "Full Funding of Air Force Procurement Programs," 1 Jun 84.

AFR 173-1, "The Air Force Cost Analysis Program," 10 Oct 75. AFSC Supplement 1, 30 Oct 80.

AFR 173-2, "Economic Escalation," 8 Feb 80.

AFSCR 173-8, "Cost Analysis Research," 24 Oct 80.

AFSCR 173-9, "Cost Estimate Documentation," 11 Mar 82.

AFR 173-11, "Independent Cost Analysis Program," 12 Dec 80.

AFR 178-1, "Economic Analysis and Program Evaluation for Resource Management," 17 Dec 79. AFSC Supplement 1, 15 Apr 82.

AFR 800-6, "Program Control-Financial," 7 Sep 76. AFSC Supplement 1, 17 Oct 77.

Rand Report, N-1882-AF, "Development of Production Cost Estimating Relationships for Aircraft Turbine Engines," Oct 82.

Program Manager, Mar-Apr 83, "AIF Action 6: Budget to Most Likely Cost," Gary J. Jungwirth, Major, USAF, page 40.

Program Manager, Nov-Dec 83, "Riding the Budget Roller Coaster: Strategies for Dealing with DOD Budget Turbulence," Patricia A. Kelley, page 41.

Program Manager, Mar-Apr 84, "Risk Funding for Realistic Budgets," George D. Schneickert, Major, USA, page 29.

Program Manager, Sep-Oct 84, "Initial Support Funding," Michael D. Delia, Lieutenant Colonel, USAF, page 32.

Chapter Seventeen

PRODUCT DESCRIPTIONS - SECTION 14

PART ONE - ACQUISITION PLAN REQUIREMENTS

In accordance with Part 10, explain the choice of product description types to be used in the acquisition.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Specifications and standards

- Limit mandatory specifications and standards to those that are essential. Unnecessary specifications increase cost.

- For absolutely essential specifications and standards, tailor them to program needs.

- Use commercial specifications and standards where possible to reduce cost and enhance future competition.

- Try to limit or eliminate peculiar or proprietary contractor specifications and standards which could inhibit future competition. This must be a cost trade-off however.

- At the program outset, consider obtaining data rights, directed licensing prerogatives, royalty agreements, and other contractor commitments necessary for follow-on competition.

- Watch for "gold plate" specifications and standards and eliminate those not necessary to achieve required program goals.

- Specifications for on-board equipment do not always need to be as rigid as for the end item. Relax these specifications if you can. Consider using commercial aircraft products. For example, use commercial aircraft coffee pots instead of military spec coffee pots.

PART THREE - REFERENCES

AFR 73-1, "Defense Standardization and Specification Program," 31 Jan 80. AFSC Supplement 1, 19 Jan 82.

AFSCR 310-1, "Management of Contractor Data," 11 Mar 74.

AFR 310-3, "Acquisition and Management of Data for Follow-on Procurements," 4 Nov 68. AFSC Supplement 1, 30 Jun 77.

AFSCR 800-25, "Application of Military Specifications and Standards to DOD Procurements," 12 Jun 75.

AFR 800-27, "Development and Use of Non-Government Specifications and Standards," 15 Mar 79.

Chapter Eighteen

PRIORITIES, ALLOCATIONS, AND ALLOTMENTS - SECTION 15

PART ONE - ACQUISITION PLAN REQUIREMENTS

When urgency of the requirement dictates a particularly short delivery or performance schedule, certain priorities may apply. If so, specify the method for obtaining and using priorities, allocations, and allotments, and the reasons for them (see Subpart 12.3)

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Program priority

- The Program Management Directive and AFSC Fm 56 specify the program priority. If the priority is not high enough to support the program, work through Hq AFSC to resolve the problem.

- Program priorities can also impact the use of critical materials. Generally, you should try to limit the use of critical materials through design trade-offs. If critical materials are necessary, ensure the program priority can support the requirement, particularly in a surge or crisis situation.

PART THREE - REFERENCES

AFR 27-1, "USAF Priority System for Resource Management," 5 Sep 84. AFSC Supplement 1, 11 Apr 83.

AFSCR 78-2, "Defense Materials and Priorities Systems," 21 Jul 77.

AFSCM 78-325, "DOD Controlled Materials System," 14 Feb 75.

Chapter Nineteen

CONTRACTOR VERSUS GOVERNMENT PERFORMANCE - SECTION 16

PART ONE - ACQUISITION PLAN REQUIREMENTS

Address the considerations given to OMB Circular No. A-76 (see Subpart 7.3)

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Follow-on contractor support

- This Section applies if you are considering follow-on contractor maintenance, training, leases, and so forth. If so, you must comply with the acquisition plan requirements.

PART THREE - REFERENCES

OMB Circular A-76

AFR 800-21, "Interim Contractor Support for Systems and Equipment," 26 Sep 78.

Chapter Twenty

MANAGEMENT INFORMATION REQUIREMENTS - SECTION 17

PART ONE - ACQUISITION PLAN REQUIREMENTS

Discuss, as appropriate, what management system will be used by the Government to monitor the Contractor's effort.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Cost/Schedule Control System Criteria (C/SCSC)

- If you are using C/SCSC, does the contract include a requirement for the cost reports?

- Are personnel trained to analyze the cost reports?

- Are the cost reports being analyzed in a timely manner so corrective action can be taken before the problems become major?

Contractor reporting

- Have data items been included in the contract to provide information that will allow monitoring in the following areas:
  -- technical,
  -- schedule,
  -- quality,
  -- supportability,
  -- and reliability and maintainability?

- Data items and reports are expensive and requirements need to be substantiated. Limit data item requirements to those absolutely essential to get the job done. Use contractor reports and formats instead of standard data item description formats to save money.

Lessons learned

- You can avoid repeating past mistakes by using lessons learned. Lessons learned apply to all aspects of the program.

- How will you find and translate lessons learned to your program? Possible sources of help include other program offices, AFIT, and the Defense Systems Management College.

- The Defense Technical Information Center (DTIC) can also provide a wealth of information on many subjects. You can obtain information on their program by calling them at AV 284-6463.

Configuration management

- Does the contractor have an adequate configuration management system in place to control changes to configuration end items?

- Do you have a well thought out configuration control board (CCB) process to ensure only those changes absolutely necessary are put on contract? Are the user and logistician involved in the CCB process?

Management reports

- Have you established procedures to develop FAR/CAR/FAR reports and briefings as required for the program?

Program financial reviews

- Program financial reviews are required at least once each year to provide an overall financial assessment of the program. Integrate this requirement into the program schedule and other program activities.

Cost alert list

- If cost goals or budgets are in danger of being breached, this condition must be reported under the cost alert system as soon as discovered.

PART THREE - REFERENCES

AFSCR 27-8, "Program Financial Reviews," 17 Apr 84.

AFR 65-3, "Configuration Management," 1 Jul 74. AFSC Supplement 1, 25 Jul 75.

AFR 310-1, "Management of Contractor Data," 8 Mar 83.

AFSCR 172-1, "Cost Alert List (CAL)," 29 Aug 84.

AFSCP 172-5, "Rules of the Road for Financial Management," 7 Jul 83.

AFSCP 173-3, "Cost/Schedule Management of Non-Major Contracts (C/SSR Joint Guide)," 1 Nov 78.

AFSCP 173-5, "Cost/Schedule Control Systems Criteria (Joint Implementation Guide)," 10 Oct 80.

AFSCP 173-6, "C/SCSC Joint Surveillance Guide," 1 Jul 74.

AFSCR 173-7, "Surveillance of Management Control Systems and Financial Reporting on Selected Contracts," 10 Dec 80.

AFSCR 800-1, "Command Review of Systems Acquisition Programs and Test Resources," 22 Jun 76.

AFR 800-5, "Selected Acquisition Reports (SARs) RCS: DD-COAFMPC0823," 8 Jun 80. AFSC Supplement 1, 22 Apr 81.

AFR 800-6, "Program Control-Financial," 7 Sep 76. AFSC Supplement 1, 17 Oct 77.

AFSCP 800-7, "Configuration Management," 1 Dec 77.

AFSCR 800-10, "Acquisition Logistics Status of Programs," 1 Mar 83.

AFR 800-13, "Air Force Feedback Program," 19 May 80.

AFSCP 800-15, "Contractor Cost Data Reporting (CCDR) System," 5 Nov 73.

AFSCR 800-37, "Joint AFLC/AFSC Lessons Learned Program," 7 Aug 81.

AFSC Lessons Learned (for example ASD RCS:SYS-SDD(A)7901).

Program Manager, Jul-Aug 83, "Taking the Heartburn Out of CS^2," Mark J. Lumer and Joseph R. Varady, Jr., page 11.

Program Manager, Jul-Aug 83, "The Cost of CS^2," Owen C. Gadeken and Thomas S. Tison, page 13.

Program Manager, Mar-Apr 84, "DTIC May Have Just What You Need," Linda McGinnis, page 38.

Chapter Twenty-one

MAKE-OR-BUY - SECTION 18

PART ONE - ACQUISITION PLAN REQUIREMENTS

Discuss any considerations given to make-or-buy programs (see Subpart 15.7)

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Make-or-buy

- The contractor should be required to conduct a make-or-buy analysis. This requirement must be included in the RFP. Make-or-buy is becoming more important with the reduction in second tier contractors. A strong make-or-buy program can help stabilize the lower tiers and provide sources for follow-on spares competition.

- Incorporate special make-or-buy provisions into the contract and discuss in Section 11.

PART THREE - REFERENCES

AFR 800-22, "CFE vs GFE Selection Process," 30 Aug 76.

Chapter Twenty-two

TEST AND EVALUATION - SECTION 19

PART ONE - ACQUISITION PLAN REQUIREMENTS

To the extent applicable, describe the test program of the contractor and the Government. Describe the test program for each major phase of a major system acquisition. If concurrency is planned, discuss the extent of testing to be accomplished before production release.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Test and Evaluation Master Plan (TEMP)

- Develop and coordinate the TEMP with the test community prior to Milestone I.

Test organization

- What kind of test organization is planned and are test personnel trained?

Developmental test and evaluation (DT&E)

- Have DT&E plans been developed and coordinated with the AFSC test organization involved?

- Government DT&E should not duplicate the testing performed by the contractor.

- Will the DT&E schedule allow the operational test and evaluation (OT&E) to be completed before the production decision?

- If using combined DT&E/OT&E, has sufficient operational test independence been built into the program?

- Don't forget the AF or other DOD labs in designing the test program. Simulators and laboratory testing can be used to help conduct some of the subsystems or component testing.

Operational test and evaluation (OT&E)

- Sufficient independent operational testing must be conducted to measure operational effectiveness and operational suitability prior to the production decision.

- Test assets must be funded early in the program to satisfy the operational test requirements.

- The program office budget must include funding for OT&E. Coordinate the budget with AFOTEC.

- With the establishment of the new DOD operational test organization, complete and timely operational testing is even more critical for a positive production decision. This office also has operational test plan approval for major systems.

Contractor's flight test

- The contractor's flying program must be certified and periodic reviews of his program are required. Make sure these are planned and scheduled to fit in with other program requirements.

- The contractor's flight test facilities must be certified.

Threat simulator

- Will a threat simulator be required for avionics systems testing? If so, plan and budget for this requirement.

- Keep the simulator current with the threat. Section 2 provides more information on the threat.

Test ranges

- Can test ranges support the program schedule? This is particularly important if special testing is necessary.

- Consider the use of contractor test ranges.

Escort aircraft

- If escort aircraft are required for testing, they must be planned for and scheduled.

- Budgets must include funds to pay for the escort aircraft.

PART THREE - REFERENCES

FSCR 55-5, "Minimum Airfield Requirements for Operation of Military Aircraft (Contractor Flight Test Operations/Projects and Tests)," 23 Feb 79.

FSCR 55-6, "Use of Escort Aircraft in Research and Development Testing," 28 Feb 80.

FR 55-11, "Programming of Requirements and Reporting Expenditures for Missile/Targets in Noncombat Firing Programs, RCS: HAF-XOO(A&SA)7101," 10 Apr 74. AFSC Supplement 1, 8 Jun 79.

FR 55-22, "Contractor's Flight Operations," 3 Apr 79. AFSC Supplement 1, 22 May 80.

FR 55-43, "Management of Operational Test and Evaluation," 13 Jun 79.

FSCP 80-6, "Laboratory Capabilities Pamphlet," 15 Apr 82.

FR 80-13, "Aircraft Structural Integrity Program," 15 Oct 84. AFSC Supplement 1, 15 Aug 77.

FR 80-14, "Test and Evaluation," 12 Sep 80. AFSC Supplement 1, 17 Nov 82.

FR 80-20, "Managing the Joint Test and Evaluation Programs," 22 Aug 84.

FR 80-25, "Threat Simulator Validation," 30 Aug 83.

FSCP 80-27, "Summary of AFSC Major Ranges and Test Facilities," 26 Jan 81.

FR 80-28, "Major Range and Test Facility Base," 31 Dec 81.

FSCP 127-2, "Flight Safety Planning Guide for Flight Testing," 31 May 73.

FSCR 172-2, "Budgeting and Funding for Laboratory Support," 28 Sep 84.

FSCR 172-8, "Budgeting and Funding for Test and Evaluation," 19 Oct 83.

Program Manager, Mar-Apr 84, "Down with 'Head in the Clouds' Testing," A. N. Hafner, page 26.

Chapter Twenty-three

LOGISTICS CONSIDERATIONS - SECTION 20

PART ONE - ACQUISITION PLAN REQUIREMENTS

Describe:

(i) The assumptions determining contractor or agency support, both initially and over the life of the acquisition, including consideration of contractor or agency maintenance and servicing (see Subpart 7.3) and distribution of commercial products (see Part 11);

(ii) The reliability, maintainability, and quality assurance requirements, including any planned use of warranties (see Part 46); and

(iii) The requirements for contractor data (including repurchase data) and data rights, their estimated cost, and the use to be made of the data (see Part 27).

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Integrated Logistics Support Plan (ILSP)

- Is the ILSP current?

- Does the ILSP reflect the supportability goals established for the program? Examples include goals for:
  -- mean time to repair (MTTR),
  -- mean time between failure (MTBF),
  -- use of built in test equipment (BITE),
  -- and many others.

- Techniques to reduce program support costs include:
  -- increasing mission reliability (mean time between maintenance actions, not just MTBF),
  -- decreasing support equipment requirements,
  -- and reducing manpower requirements, especially in the area of requirements for many different skills.

roduction readiness

- A production readiness review must be conducted before the roduction decision. Has this been included in the program chedule? This requirement is also applicable to ubcontractors.

eprocurement data

- Public Law 98-577 requires the contractor to provide eprocurement data except under certain conditions. The mplementing procedures for this law are still being developed. he contracting officer should be able to provide additional nformation on this requirement.

- Section 9 also addresses reprocurement data onsiderations.

roprietary data

- Public Law 98-577 requires the contractor to justify laims to proprietary data and allows the government to hallenge these claims.

PART THREE - REFERENCES

FR 18-1, "Air Force Energy Conservation and Management," 20 Jul 81.

FSCR 84-2, "Production Readiness Review," 7 Jan 81.

FSCP 84-4, "AFSC Guide for Manufacturing Reviews," 20 Jan 78.

FR 320-1, "Air Force Value Engineering Program," 15 Nov 76. AFSC Supplement 1, 30 Sep 77.

FP 320-2, "Guide for Contractors," 19 Sep 83.

FR 400-3, "Foreign Military Sales," 22 May 81.

FSCR 400-42, "Foreign Military Sales Lessons Learned," 8 Sep 76.

FR 800-9, "Manufacturing Management Policy for Air Force Contracts," 8 Nov 83.

FSCR 800-9, "Manufacturing Management," 21 Sep 84.

rogram Manager, May-Jun 84, "Value Engineering: Looking for a Better Idea," Alan W. Beck, page 38.

Chapter Twenty-eight

OTHER CONSIDERATIONS - SECTION 25

PART ONE - ACQUISITION PLAN REQUIREMENTS

scuss, as applicable, energy conservation measures, andardization concepts, the industrial readiness program, the fense Production Act, the Operational Safety and Health Act, reign sales implications, and any other matters germane to the an not covered elsewhere.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

ergy conservation

- The contractor should consider energy conservation in stem design. This could be included as a source-selection ctor. If you use this as a source-selection factor, it must in the source-selection evaluation plan discussed in Section).

lue engineering

- You should consider including a requirement for a value gineering program in the contract.

reign Military Sales (FMS)

- Is the program an FMS candidate? If so, develop visions for R&D recoupment and consider questions of chnical release.

nufacturing review

- A manufacturing review is generally required during urce-selection to ascertain the contractor's capability to oduce the system.

- Other manufacturing considerations are addressed in ction 21.

PART THREE - REFERENCES

AFSCP 55-4, "You and OPSEC," 14 Jul 75.

AFR 55-30, "Operations Security," 11 Apr 83. AFSC Supplement 1, 14 Dec 83.

AFR 70-4, "Physical Security of Sensitive Conventional Arms, Ammunition, and Explosives (AA&E) at Contractor Facilities," 29 Aug 84. AFSC Supplement 1, 2 Jun 83.

AFR 205-1, "Information Security Program," 7 Dec 82. AFSC Supplement 1, 25 May 83.

AFR 205-4, "Air Force Participation in the DOD Industrial Security Program," 2 Aug 76. AFSC Supplement 1, 10 Jul 81.

AFR 205-37, "DOD Handbook for Writing Security Classification Guidance," 30 Dec 81. AFSC Supplement 1, 16 Aug 82.

AFR 205-49, "Security Classification Standards for Air Force Weapon Systems, Supporting Systems, Associated Subsystems, Miscellaneous Aircraft, and Aircraft Engines," 6 Feb 76.

AFR 800-29, "Application of Specialized Management," 11 Feb 82.

Chapter Twenty-seven

SECURITY CONSIDERATIONS - SECTION 24

PART ONE - ACQUISITION PLAN REQUIREMENTS

For acquisitions dealing with classified matters, discuss how adequate security will be established, maintained, and monitored.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Operations Security (OPSEC)

- OPSEC must be applied to all programs and program office personnel need to be aware of this requirement.

Security Classification Guide

- For classified systems or systems with classified subsystems, a Security Classification Guide must be developed.

Contractor security

- If there are classified documents (SON, SOC, etc.), contractor security provisions must be certified. You must include this requirement in the RFP.

Physical security

- If munitions are to be stored or used at contractor facilities, he must satisfy physical security provisions. This requirement must be included in the RFP.

Specialized management

- Special security provisions apply to certain classified programs. See AFR 800-29 for further details.

Chapter Twenty-six

ENVIRONMENTAL CONSIDERATIONS - SECTION 23

PART ONE - ACQUISITION PLAN REQUIREMENTS

Discuss environmental issues associated with the acquisition, the applicability of an environmental assessment or environmental impact statement (see 40 CFR 1502), the proposed resolution of environmental issues, and any environment-related requirements to be included in solicitations and contracts.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Environmental issues

- Any environmental issues (facility locations and layouts, such as dense pack, or operational locations, such as the mobile ICBM) must be worked early. If impact statements or assessments are required, these requirements must be integrated into the program schedule.

- Environmental issues can also affect production of the system if new production facilities are required or if potential environmentally hazardous production processes are necessary.

PART THREE - REFERENCES

AFR 19-1, "Pollution Abatement and Environmental Quality," 9 Jan 78.

AFR 19-2, "Environmental Impact Analysis Process," 10 Aug 82.

Chapter Twenty-five

GOVERNMENT FURNISHED INFORMATION - SECTION 22

PART ONE - ACQUISITION PLAN REQUIREMENTS

Discuss any Government information, such as manuals, drawings, and test data, to be provided to prospective offerors and contractors.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Integrating information

- If the government is the system integrator, prime and subcontractors will have to be provided information on interface, space, power, and other requirements. This information must be accurate to ensure the complete system functions correctly and to prevent possible future claims or rework.

Competition

- In follow-on competition, the government furnished information must be accurate and not include any non-releasable proprietary information from the original contractor.

PART THREE - REFERENCES

AFR 800-27, "Development and Use of Non-Government Specifications and Standards," 15 Mar 79.

AFR 800-34, "Engineering Data Acquisition," 11 Apr 83.

Excess equipment

- Identify excess equipment and develop disposal plans to avoid charges for storage and maintenance.

- Are there plans to dispose of government equipment following production closeout?

Government furnished equipment (GFE)

- Use of standard GFE items can result in significant life-cycle cost savings. Using GFE does entail some risks and trade-offs, however. Risks include late delivery, defective equipment, integration problems, and so forth. Trade-offs may involve reduced performance. Good management can overcome the risks as long as they are identified. Performance trade-offs must be coordinated with the user.

PART THREE - REFERENCES

AFR 78-9, "Management of Defense Owned Industrial Plant Equipment," 19 Nov 73.

AFR 78-22, "Management of Industrial Facilities," 22 Jun 84. AFSC Supplement 1, 30 Jun 77.

AFR 80-22, "Funding to Acquire Research and Development Facilities and Install Research and Development Equipment," 30 Apr 81.

AFR 800-9, "Manufacturing Management Policy for Air Force Contracts," 8 Nov 83. AFSC Supplement 1, 21 Sep 84.

AFSCR 800-17, "Technology Modernization (Tech Mod)," 1 Nov 83.

AFR 800-22, "CFE vs GFE Selection Process," 30 Aug 76.

AFSCR 800-31, "Government-Furnished Equipment/Contractor-Furnished Equipment (GFE/CFE) Selection Process, GFE Acquisition and GFE Management," 13 Jul 79.

AFR 800-33, "Manufacturing Technology Program," 25 Apr 82.

Chapter Twenty-four

GOVERNMENT FURNISHED PROPERTY - SECTION 21

PART ONE - ACQUISITION PLAN REQUIREMENTS

Indicate any property to be furnished to the contractors, including material and facilities, and discuss any associated considerations, such as its availability or the schedule for its acquisition (see Part 45).

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Facility construction

- Are additional or new government facilities required for production or test of the system? If so, have funds been budgeted? Does the schedule allow the time needed to acquire these facilities?

Productivity improvement program

- Are there plans to provide government equipment to enhance system productivity? Is funding budgeted for this equipment?

- You can encourage contractor investment in productivity equipment through contract incentives.

- Manufacturing technology (MANTECH) and technology modernization (Tech Mod) programs should be pursued.

Surge equipment

- Is additional government equipment required to surge production? If so, have funds been budgeted?

- Section 5 addresses other surge considerations.

AFSCR 800-36, "Logistics Support Analysis (LSA)," 5 Jun 81.

AFSCP 800-38, "Joint Service Automatic Testing (AT) Acquisition Planning Guide," 19 Mar 81.

AFSCP 800-39, "Built-In-Test Design Guide," 19 Mar 81.

AFSCP 800-40, "Joint Service Weapon System Acquisition Review Guidelines for Automatic Testing (AT)," 19 Mar 81.

AFSCP 800-41, "Selection Guide for Digital Test Program Generation Systems," 19 Mar 81.

AFSCP 800-44, "System Safety Groups (SSG)," 12 Dec 84.

AFSCP 800-47, "Joint Engine Warranty Development Guide," 26 Oct 84.

Program Manager, Jan-Feb 84, "Balancing on the Technical Manager's Tightwire," Wilbur V. Arnold and Richard M. Stepler, page 24.

Program Manager, Mar-Apr 84, "Warranties: A Few Basics on the Latest Hot Topic," Alan W. Beck, page 9.

Program Manager, Mar-Apr 84, "The Tower of Babel: System Support and Readiness," George S. Merchant, Major, USAF, page 11.

Program Manager, Sep-Oct 84, "Improving System Support and Readiness," Robert E. Cochoy, Lieutenant Colonel, USAF, page 7.

Program Manager, Nov-Dec 84, "Warranties," Peter G. Paulson, Major, USA, page 7.

AFSCR 800-8, "Acquisition of Engineering Drawings and Associated Lists," 31 Jul 73.

AFR 800-11, "Life Cycle Cost Management Program," 27 Jan 84. AFSC Supplement 1, 26 Oct 79.

AFR 800-15, "Human Factors Engineering and Management," 1 Oct 74. AFSC Supplement 1, 4 Jun 76.

AFR 800-16, "USAF System Safety Program," 6 Jun 79. AFSC Supplement 1, 20 Oct 81.

AFR 800-18, "Air Force Reliability and Maintainability Program," 15 Jun 82. AFSC Supplement 1, 14 Apr 83.

AFR 800-20, "Defective Parts and Components Control Program (DPCCP)," 5 May 75.

AFSCR 800-20, "Defective Parts and Components Control Program (DPCCP)," 20 Aug 80.

AFR 800-21, "Interim Contractor Support for Systems and Equipment," 26 Sep 78. AFSC Supplement 1, 28 Jan 80.

AFR 800-22, "CFE vs GFE Selection Process," 30 Aug 76.

AFSCR 800-23, "Policy for Modular Automatic Test Equipment (MATE)," 25 Jan 84.

AFR 800-24, "Parts Control Program (PCP)," 2 Dec 77. AFSC Supplement 1, 21 Sep 79.

AFSCR 800-24, "Standard Integrated Support Management System," 27 May 77.

AFR 800-26, "Spares Acquisition Integrated with Production (SAIP)," 17 Feb 78. AFSC Supplement 1, 8 Sep 81.

AFSCR 800-28, "Repair Level Analysis (RLA) Program," 29 May 81.

AFSCR 800-31, "Government-Furnished Equipment/ Contractor-Furnished Equipment (GFE/CFE) Selection Process, GFE Acquisition and GFE Management," 13 Jul 79.

AFSCR 800-32, "Depot Maintenance Activation Planning (DMAP)," 5 Feb 82.

AFR 800-34, "Engineering Data Acquisition," 11 Apr 83.

AFSCP 800-34, "Acquisition Logistics Management," 12 Aug 81.

PART THREE - REFERENCES

AFR 25-8, "Logistics Composite Model," 3 Nov 78.

AFR 25-8, Volume IV, "Logistics Composite Modeling," 1 Dec 80.

AFR 65-2, "Provisioning of End Items of Material," 2 Jul 73.

AFR 74-1, "Quality Assurance Program," 1 Jun 79.

AFSCR 74-1, "AFSC Quality Assurance Program," 1 Dec 82.

AFR 74-4, "DOD Quality System Review Program," 26 Nov 82.

AFR 74-9, "Acquisition Quality Assurance for International Contracts," 22 Feb 83.

AFR 74-15, "Procurement Quality Assurance," 30 Aug 76.

AFR 74-17, "Defense In-Plant Quality Assurance Program," 30 Aug 76.

AFR 80-10, "Government-Industry Data Exchange Program (GIDEP)," 15 May 80.

AFR 80-24, "Reliability and Maintainability Data Sources," 1 Nov 84.

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AFSCP 800-4, "Repair Level Analysis (RLA) Procedures," 25 Nov 83.

AFSCR 800-5, "Support Equipment Acquisition Management," 15 Sep 83.

AFP 800-7, "Integrated Logistics Support Implementation Guide for DOD Systems and Equipment," Mar 72.

AFR 800-8, "Integrated Logistics Support (ILS) Program," 7 Feb 80. AFSC Supplement 1, 30 Jan 81.

- This includes predictions for both CFE and GFE.

System safety

- Is a system safety program in effect?

Quality system for production

- Does the contractor have a sound quality system in place and is it being monitored?

- What is the agreed level of quality?

- Are quality design reviews planned?

- Is there a quality assurance function set up? If not, this function should be organized.

Warranties

- The FY85 Defense Authorization Act modified the FY84 warranty provisions. Essentially, warranties are now required on production items that can be used directly for a military purpose, i.e., end items.

  -- The warranty provisions require the product to meet specifications, be free from defects in material and workmanship, and meet performance requirements. If the product does not meet these requirements the contractor is liable for costs to correct.

  -- These provisions make it extremely important to establish measurable operational requirements. See Sections 1 and 4.

  -- Warranties may not be required if you can show they are not cost effective.

  -- Warranties must be tailored for each specific program.

- Reliability improvement warranties (RIW) can also be used to improve reliability as the system matures.

- There is a Product Performance Agreement Center at ASD (ASD/PM-PPAC) to provide assistance and information on warranties.

Government-Industry Data Exchange Program (GIDEP)

- Manufacturing personnel should be aware of the GIDEP program and the contractor should also be tied in.

Manpower requirements

- Are the required numbers of people and skills going to be available when the system is fielded or do new schools need to be established?

- Could existing skills and training courses be used through a different equipment design or through standardization with existing systems and equipment? Trade-offs here can reduce manpower and new skill requirements.

Provisioning requirements

- Good provisioning is vital with the current emphasis on spares costs. A good job at provisioning can support the spares cost reduction effort, so emphasize this area.

- Provisioning also impacts reprocurement data requirements. Reprocurement data is discussed in Sections 9 and 25.

- Spares can be bought with production assets through the spares acquisition integrated with production (SAIP) program. This can reduce costs. If SAIP is not used, justify why not in the ILSP.

- GFE vs CFE selection can impact spares requirements and this should be a factor in the selection process. See Section 21 for further information on GFE/CFE.

Reliability and maintainability (R&M) program plan

- R&M must be designed into the system from the start. This requirement dictates top level emphasis.

R&M trade-offs

- Discuss R&M trade-offs that have been made and whether these trade-offs impact performance or cost. Have these changes been incorporated into the program baseline?

Reliability, availability, and maintainability (RAM) predictions

- Establish RAM goals and thresholds or threshold ranges. Define the goals in operational terms, and by Milestone II set goals for system RAM parameters directly related to:
  -- operational readiness,
  -- mission success,
  -- manpower costs,
  -- and logistic support costs.

- Define maintenance requirements for the operational environment and personnel skill levels that will exist in the field. Good design trade-offs can minimize maintenance actions. For example, use of BITE can eliminate support equipment requirements. On-equipment remove and replace type maintenance can reduce skill level requirements as well as the number of different skills required for flight line maintenance. However, both impact the acquisition cost.

- Consider the trade-offs involved in two vs three level maintenance. Three level maintenance is difficult to deploy and is more vulnerable. However, three level maintenance makes sense for systems that do not require forward deployment. Two level maintenance may be more expensive.

- Plan for depot maintenance requirements early in system development. Consider whether depot support should be organic or contractor.

Interim contractor support

- Consider the requirement for interim contractor support early in planning. If it is required for initial operations, justification must be developed. Section 16 also addresses this area.

Support equipment requirements

- The operations and maintenance concept drives the support equipment requirements. Support equipment recommendation data (SERDs) cannot be developed and reviewed until the operations and maintenance concept is firm.

Logistic Support Analysis (LSA)

- Conduct the LSA early and review and use it throughout the life of the program. The LSA can help to identify logistics trade-offs. Section 6 has more information on trade-offs.

Repair Level Analysis (RLA)

- RLA provides a method to determine the optimum repair level for components. Conduct the RLA as part of the LSA.

Logistics Composite Model (LCOM)

- The LCOM provides estimates of manpower requirements and these estimates are required for DSARC reviews. Cost estimates from the LCOM should be reflected in Section 3.

Chapter Twenty-nine

MILESTONES FOR THE ACQUISITION CYCLE - SECTION 26

PART ONE - ACQUISITION PLAN REQUIREMENTS

Address the following steps and any others appropriate (sic):

- Acquisition plan approval
- D&F approval
- Completion of acquisition-package preparation
- Statement of work
- Specification
- Data requirements
- Purchase request
- Issuance of solicitation
- Evaluation of proposals, audits, and field reports
- Beginning and completion of negotiations
- Contract preparation, review, and clearance
- Contract award

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Milestone chart

- Include all important relationships in the milestone chart. The milestone chart should provide a picture of the entire program, not just the contract milestones listed above.

Updating the acquisition strategy

- The acquisition strategy, as outlined in this guide, can form the basis for conducting internal program reviews. Discuss the considerations addressed in each Section and update the strategy and program management plan as required.

PART THREE - REFERENCES

None

Chapter Thirty

IDENTIFICATION OF PARTICIPANTS IN ACQUISITION PLAN PREPARATION - SECTION 27

PART ONE - ACQUISITION PLAN REQUIREMENTS

List the individuals who participated in preparing the acquisition plan, giving contact information for each.

PART TWO - OTHER ACQUISITION STRATEGY CONSIDERATIONS

Participants

- This section provides a good historical record of participants in the preparation of the acquisition strategy. This should help establish some corporate memory by keeping track of offices that supported the development and people who helped and have since moved on.

PART THREE - REFERENCES

None

Chapter Thirty-one

CONCLUSION

A management text, discussing the value and importance of management strategy, noted:

> The challenges of our dynamic economy require strategic planning by top management similar in many respects to that done by the General Staff of an army. It used to be that wars could be won by brilliant field generals who operated on the basis of genius, experience, and hunch. Today *battles* may be won by such generals. But *wars* are won by strategic planning based on a careful estimate of the total situation. (1:61)

So, too, it is with the acquisition of defense weapon systems. Program managers can acquire these systems by depending on genius, experience, and hunch and without a lot of long-term thought or planning, just as the above quote notes battles can be won. However, these systems cannot be fielded and economically supported over their life in this manner. Just as wars are won by strategic planning, economically fielding an operationally effective weapon system for a 20 or 30 year period requires strategic planning at the outset of the development process. This strategic planning takes the form of an "acquisition strategy."

This "Acquisition Strategy Guide" provides a foundation for building an acquisition strategy that will win the acquisition "war." This guide does not provide all the answers needed to develop an acquisition strategy. Rather, it seeks to raise issues to be addressed. To provide a guide that answers all questions is a much bigger task than one individual can accomplish. Ultimately, the whole program management team must help develop the acquisition strategy. This development is done under the guidance of the program manager who lays out the overall program goals and concepts to be followed.

This guide will help the program manager develop an acquisition strategy that can grow and evolve as the program moves forward. This guide can also provide a method for a newly assigned program manager to review the existing acquisition

strategy. Further, this guide can provide a long term "to do" list of important initiatives since many of the issues raised require long-term efforts to resolve.

The author suggested several revisions to regulations that deal with acquisition strategy. While these revisions are not necessary to develop an acquisition strategy, they would help resolve much of the misunderstanding that surrounds acquisition strategy planning. The author also believes these suggested revisions would add emphasis to the importance of acquisition strategy.

The author also suggested a method to help automate the development and maintenance of the program acquisition strategy. This could be accomplished by exploiting the capability the Air Force now has with the Zenith Z-100 micro-computer acquisition.

The bottom line for the acquisition community is they can continue to be "beat about the head and shoulders" for cost overruns, systems that don't work, and spare parts that cost too much, or they can begin to avoid these problems through planning. An "Acquisition Strategy Guide," as suggested in this paper, can serve to provide the needed framework for the necessary long-term planning needed to win the acquisition "war."

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